

SPECIFICATION AMENDMENTS

Page 11, between lines 34 and 36, after the description of Figure 3, please insert:

Figure 4 is a schematic view of the production steps.

Change(s) applied

to document,

/A.E.G./ Page 11, line 36 to page 12, line ~~24~~<sup>8</sup> please replace the paragraph with the following  
10/18/2011 amended paragraph:

According to ~~figure 4 Figures 1 and 2~~, a portion of an assay chip 2 is shown to illustrate the biological function of a membrane protein 3. This assay chip 2 is the essential pre-requisite for the investigation of binding activities of the membrane proteins 3 which now combines both, the advantages of the supported 4 and of the free standing lipid bilayer membrane 5 as discussed above. The assay chip 2 comprises an array substrate 28 and a 300 nm thick silicon nitride layer 6 having sections in form of arrays 7 of pores 8 of diameters in the range of 50 nm and 2  $\mu\text{m}$ .

Page 14, line 18 to line 27 please replace the paragraph with the following  
amended paragraph:

Figure 2 depicts in a schematic way the design of a assay chip 2 which comprises in this embodiment ~~a array~~ an assay substrate 28 of  $100 \text{ mm}^2$  total area having a 300 nm thin silicon nitride layer 6 with the actual nanopore array 7. The size of the silicon nitride membrane section 29 having the actual nanopore arrays 7 is about  $1 \text{ mm}^2$ . A nanopore array section 7 of  $400 \times 400 \mu\text{m}$  comprises nanopores 8 having diameters in the range of 50 to 2000 nm (indicated at 30). The distance of the nanopores 8